The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-59 cancelled.

60. (currently amended) A method for providing dynamic feedback control of network elements in a data network, the data network including a plurality of network elements, each of said network elements having a plurality operating parameters associated therewith, said method comprising:

receiving a first portion of information relating to a first communication flow between a first network node and a second network node, the first portion of information including quality control information relating to the first communication flow, the quality control information including at least one quality control parameter;

analyzing, using an analysis entity, at least a portion of the quality control information to determine whether the quality control information ~~quality standards relating to the first communication flow~~ conforms with predetermined criteria;

detecting a problem relating to the first communication flow based on the analysis of the quality control information;

automatically taking action, in response to detecting the problem, to resolve the problem by generating updated operating parameter information relating to a selected portion of network elements;

wherein the updated operating parameter information includes information relating to at least one of: (a) updated committed information rate information for adjusting at least one committed information rate value associated with at least one network element of the selected portion of network elements, (b) updated excess information rate information for adjusting at least one excess information rate value associated with at least one network element of the selected portion of network elements, (c) updated committed burst size parameter information for adjusting at least one committed burst size parameter value associated with at least one network element of the selected portion of network elements, and (d) updated excess burst size parameter information for adjusting at least one excess burst size parameter value associated with at least one network element of the selected portion of network elements; and

providing the updated operating parameter information to the selected portion of network elements to thereby cause the selected portion of network elements to modify their respective operating parameters in a manner which results in a correction of the problem relating to the first communication flow.

61. (previously presented) The method of claim 60 wherein the selected portion of network elements correspond to network elements associated with the first communication flow.

62. (previously presented) The method of claim 60 wherein the updated operating parameter information specifies an adjustment amount relating to at least one operating parameter of at least one network element of the selected portion of network elements.

63. (previously presented) The method of claim 60 wherein the updated operating parameter information includes updated committed information rate information for adjusting at least one committed information rate value associated with at least one network element of the selected portion of network elements.

64. (previously presented) The method of claim 60 wherein the updated operating parameter information includes updated excess information rate information for adjusting at least one excess information rate value associated with at least one network element of the selected portion of network elements.

65. (previously presented) The method of claim 60 wherein the updated operating parameter information includes updated committed burst size parameter information for adjusting at least one committed burst size parameter value associated with at least one network element of the selected portion of network elements.

66. (previously presented) The method of claim 60 wherein the updated operating parameter information includes updated excess burst size parameter information for adjusting at least one excess burst size parameter value associated with at least one network element of the selected portion of network elements.

67. (previously presented) The method of claim 60 wherein said analysis entity is a policy engine operable to analyze said first portion of information based upon selected guidelines to determine whether performance criteria relating to the first communication flow conform with predetermined criteria.

68. (previously presented) The method of claim 60 wherein the updated operating parameter information specifies an adjustment amount to an operating parameter associated with at least one network element of the selected portion of network elements to thereby effect remote dynamic reconfiguration of the operating parameter associated with the at least one network element.

Claim 69 cancelled.

70. (previously presented) The method of claim 60 further comprising modifying the predetermined criteria in response to the analysis of the quality control information.

71. (previously presented) The method of claim 60 wherein the first portion of information is compiled by at least one network element of the selected portion of network elements.

72. (previously presented) The method of claim 60 wherein the first portion of information is received periodically.

73. (previously presented) The method of claim 60 wherein the first portion of information is received aperiodically in response to changes in the operating parameter information associated with at least one network element of the selected portion of network elements.

74. (previously presented) The method of claim 60 wherein the quality control information includes dropped packet information relating to the first communication flow.

75. (previously presented) The method of claim 60 wherein receiving the first portion of information and providing the updated operating parameter information are performed by a single network controller.

76. (previously presented) The method of claim 60 wherein receiving the first portion of information and providing the updated operating parameter information are performed by a plurality of network controllers.

77. (currently amended) A system for providing dynamic feedback control of network elements in a data network, the data network including a plurality of network elements, each of said network elements having a plurality operating parameters associated therewith, said system comprising:

at least one processor;

at least one interface configured or designed to provide a communication link to at least one other network device in the data network; and

memory;

the system being configured or designed to receive a first portion of information relating to a first communication flow between a first network node and a second network node, the first portion of information including quality control information relating to the first communication flow, the quality control information including at least one quality control parameter;

the system being configured or designed to analyze, , using an analysis entity, at least a portion of the quality control information to determine whether the quality control information ~~quality standards relating to the first communication flow~~ conforms with predetermined criteria;

the system being configured or designed to detect a problem relating to the first communication flow based on the analysis of the quality control information;

the system being configured or designed to automatically take action, in response to detect the problem, to resolve the problem by generating updated operating parameter information relating to a selected portion of network elements;

wherein the updated operating parameter information includes information relating to at least one of: (a) updated committed information rate information for adjusting at least one committed information rate value associated with at least one network element of the selected portion of network elements, (b) updated excess information rate information for adjusting at least one excess information rate value associated with at least one network element of the selected portion of network elements, (c) updated committed burst size parameter information for adjusting at least one committed burst size parameter value associated with at least one

network element of the selected portion of network elements, and (d) updated excess burst size parameter information for adjusting at least one excess burst size parameter value associated with at least one network element of the selected portion of network elements; and

the system being configured or designed to provide the updated operating parameter information to the selected portion of network elements to thereby cause the selected portion of network elements to modify their respective operating parameters in a manner which results in a correction of the problem relating to the first communication flow.

78. (previously presented) The system of claim 77 wherein the selected portion of network elements correspond to network elements associated with the first communication flow.

79. (previously presented) The system of claim 77 wherein the updated operating parameter information specifies an adjustment amount relating to at least one operating parameter of at least one network element of the selected portion of network elements.

80. (previously presented) The system of claim 77 wherein the updated operating parameter information includes updated committed information rate information for adjusting at least one committed information rate value associated with at least one network element of the selected portion of network elements.

81. (previously presented) The system of claim 77 wherein the updated operating parameter information includes updated excess information rate information for adjusting at least one excess information rate value associated with at least one network element of the selected portion of network elements.

82. (previously presented) The system of claim 77 wherein the updated operating parameter information includes updated committed burst size parameter information for adjusting at least one committed burst size parameter value associated with at least one network element of the selected portion of network elements.

83. (previously presented) The system of claim 77 wherein the updated operating parameter information includes updated excess burst size parameter information for adjusting

at least one excess burst size parameter value associated with at least one network element of the selected portion of network elements.

84. (previously presented) The system of claim 77 wherein said analysis entity is a policy engine operable to analyze said first portion of information based upon selected guidelines to determine whether performance criteria relating to the first communication flow conform with predetermined criteria.

85. (previously presented) The system of claim 77 wherein the updated operating parameter information specifies an adjustment amount to an operating parameter associated with at least one network element of the selected portion of network elements to thereby effect remote dynamic reconfiguration of the operating parameter associated with the at least one network element.

Claim 86 cancelled.

87. (previously presented) The system of claim 77 being further configured or designed to modify the predetermined criteria in response to the analysis of the quality control information.

88. (previously presented) The system of claim 77 wherein the first portion of information is compiled by at least one network element of the selected portion of network elements.

89. (previously presented) The system of claim 77 wherein the first portion of information is received periodically.

90. (previously presented) The system of claim 77 wherein the first portion of information is received aperiodically in response to changes in the operating parameter information associated with at least one network element of the selected portion of network elements.

91. (previously presented) The system of claim 77 wherein the quality control information includes dropped packet information relating to the first communication flow.

92. (previously presented) The system of claim 77 wherein receiving the first portion of information and providing the updated operating parameter information are performed by a single network controller.

93. (previously presented) The system of claim 77 wherein receiving the first portion of information and providing the updated operating parameter information are performed by a plurality of network controllers.

94. (previously presented) A computer program product for providing dynamic feedback control of network elements in a data network, the data network including a plurality of network elements, each of said network elements having a plurality operating parameters associated therewith, said computer program product comprising:

a computer usable medium having computer readable code embodied therein, the computer readable code comprising:

computer code for receiving a first portion of information relating to a first communication flow between a first network node and a second network node, the first portion of information including quality control information relating to the first communication flow, the quality control information including at least one quality control parameter;

computer code for analyzing, , using an analysis entity, at least a portion of the quality control information to determine whether the quality control information ~~quality standards relating to the first communication flow~~ conforms with predetermined criteria;

computer code for detecting a problem relating to the first communication flow based on the analysis of the quality control information;

computer code for automatically taking action, in response to detecting the problem, to resolve the problem by generating updated operating parameter information relating to a selected portion of network elements;

wherein the updated operating parameter information includes information relating to at least one of: (a) updated committed information rate information for adjusting at least one committed information rate value associated with at least one network element of the selected portion of network elements, (b) updated excess information rate information for adjusting at least one excess information rate value associated with at least one network element of the selected portion of network elements, (c) updated committed burst size parameter information

for adjusting at least one committed burst size parameter value associated with at least one network element of the selected portion of network elements, and (d) updated excess burst size parameter information for adjusting at least one excess burst size parameter value associated with at least one network element of the selected portion of network elements; and

computer code for providing the updated operating parameter information to the selected portion of network elements to thereby cause the selected portion of network elements to modify their respective operating parameters in a manner which results in a correction of the problem relating to the first communication flow.

95. (previously presented) The computer program product of claim 94 wherein the selected portion of network elements correspond to network elements associated with the first communication flow.

96. (previously presented) The computer program product of claim 94 wherein the updated operating parameter information specifies an adjustment amount relating to at least one operating parameter of at least one network element of the selected portion of network elements.

97. (previously presented) The computer program product of claim 94 wherein the updated operating parameter information includes updated committed information rate information for adjusting at least one committed information rate value associated with at least one network element of the selected portion of network elements.

98. (previously presented) The computer program product of claim 94 wherein the updated operating parameter information includes updated excess information rate information for adjusting at least one excess information rate value associated with at least one network element of the selected portion of network elements.

99. (previously presented) The computer program product of claim 94 wherein the updated operating parameter information includes updated committed burst size parameter information for adjusting at least one committed burst size parameter value associated with at least one network element of the selected portion of network elements.

100. (previously presented) The computer program product of claim 94 wherein the updated operating parameter information includes updated excess burst size parameter information for adjusting at least one excess burst size parameter value associated with at least one network element of the selected portion of network elements.

101. (previously presented) The computer program product of claim 94 wherein said analysis entity is a policy engine operable to analyze said first portion of information based upon selected guidelines to determine whether performance criteria relating to the first communication flow conform with predetermined criteria.

102. (previously presented) The computer program product of claim 94 wherein the updated operating parameter information specifies an adjustment amount to an operating parameter associated with at least one network element of the selected portion of network elements to thereby effect remote dynamic reconfiguration of the operating parameter associated with the at least one network element.

Claim 103 cancelled.

104. (previously presented) The computer program product of claim 94 further comprising computer code for modifying the predetermined criteria in response to the analysis of the quality control information.

105. (previously presented) The computer program product of claim 94 wherein the first portion of information is compiled by at least one network element of the selected portion of network elements.

106. (previously presented) The computer program product of claim 94 wherein the first portion of information is received periodically.

107. (previously presented) The computer program product of claim 94 wherein the first portion of information is received aperiodically in response to changes in the operating parameter information associated with at least one network element of the selected portion of network elements.

108. (previously presented) The computer program product of claim 94 wherein the quality control information includes dropped packet information relating to the first communication flow.

109. (previously presented) The computer program product of claim 94 wherein receiving the first portion of information and providing the updated operating parameter information are performed by a single network controller.

110. (previously presented) The computer program product of claim 94 wherein receiving the first portion of information and providing the updated operating parameter information are performed by a plurality of network controllers.

111. (currently amended) A system for providing dynamic feedback control of network elements in a data network, the data network including a plurality of network elements, each of said network elements having a plurality operating parameters associated therewith, said ~~computer program product~~ system comprising:

means for receiving a first portion of information relating to a first communication flow between a first network node and a second network node, the first portion of information including quality control information relating to the first communication flow, the quality control information including at least one quality control parameter;

means for analyzing, , using an analysis entity, at least a portion of the quality control information to determine whether the quality control information ~~quality standards relating to the first communication flow~~ conforms with predetermined criteria;

means for detecting a problem relating to the first communication flow based on the analysis of the quality control information;

means for automatically taking action, in response to detecting the problem, to resolve the problem by generating updated operating parameter information relating to a selected portion of network elements;

wherein the updated operating parameter information includes information relating to at least one of: (a) updated committed information rate information for adjusting at least one committed information rate value associated with at least one network element of the selected portion of network elements, (b) updated excess information rate information for adjusting at least one excess information rate value associated with at least one network element of the selected portion of network elements, (c) updated committed burst size parameter information

for adjusting at least one committed burst size parameter value associated with at least one network element of the selected portion of network elements, and (d) updated excess burst size parameter information for adjusting at least one excess burst size parameter value associated with at least one network element of the selected portion of network elements; and

means for providing the updated operating parameter information to the selected portion of network elements to thereby cause the selected portion of network elements to modify their respective operating parameters in a manner which results in a correction of the problem relating to the first communication flow.